

REMARKS

In the above amendments, the applicant corrects the informalities noted by the examiner with respect to the "IIR" and "FIR" acronyms on page 12, and with respect to calling out reference number 24 of Fig. 1 at the appropriate place in the specification. However, the applicant has not changed the preamble of claim 1, wherein the examiner alleges that the term "two or more transmitters and a fewer number of receivers" is indefinite. The meaning of the preamble in claim 1 is plain beyond argument on its face, and an indefiniteness rejection is inappropriate. The applicant respectfully suggests that the examiner seek the opinions of one or more colleagues regarding this matter.

The examiner's claim rejections also are inappropriate, and the applicant respectfully requests that the examiner withdraw them. For example, the examiner rejects claims 1-5, 7-9, 21, and 23-29, as being anticipated Harrison (U.S. Pat. No. 6,067,324). As the examiner knows, a reference cited as an anticipating reference under 35 U.S.C. § 102 must disclose each and every element of the claimed invention. Harrison utterly fails to teach the claimed invention, and is an inappropriate basis for an anticipation rejection.

Claim 1 is based on having two or more transmitters and a fewer number of receivers and includes these limitations:

- (1) transmitting information signals for said receivers jointly from said two or more transmitters, said information signals pre-filtered based on propagation channel estimates;
- (2) transmitting at least one dummy pilot signal jointly from said transmitters, said at least one dummy pilot signal pre-filtered based on said propagation channel estimates; and
- (3) receiving loop back signals from said receivers having dummy pilot signal interference that is dependent on the accuracy of said propagation channel estimates; and
- (4) revising said propagation channel estimates based on said loop back signals.

With respect to the first limitation of claim 1, the examiner states that Harrison teaches jointly transmitting "channel impulse response" from two or more transmitters, which the examiner says reads on the applicant's claimed step of jointly transmitting information signals.

Harrison does not teach jointly transmitting 'channel impulse response' from its antenna elements; it teaches the transmission of a different element pilot from each antenna. The receiving subscriber unit uses the element pilot received from each antenna array element to estimate the propagation channel between it and that antenna element.

Note that the examiner cited col. 2, line 65 of Harrison for the proposition that 'channel impulse response' is jointly transmitted from Harrison's antenna elements, but that section (and all other relevant sections) of Harrison flatly contradict the examiner and make it clear that the transmitters transmit element pilots to the subscriber units (receivers). The subscriber units calculate channel impulse responses based on the element pilots—no such information is transmitted from the transmitters to the subscriber units, and, even if it was transmitted, it would not be the applicant's claimed jointly-transmitted information signals.

With respect to the second limitation of claim 1, the examiner states that Harrison teaches jointly transmitting a "synthesized pilot," which the examiner equates to the claimed joint transmission of a dummy pilot signal. First, Harrison plainly teaches the transmission of a separate element pilot from each of Harrison's antenna array elements—see col. 2, line 40, col. 2, for example. There is no transmission of a "synthesized pilot" in Harrison, much less the joint transmission of a "synthesized pilot." Indeed, in Harrison, the only "synthesized pilot" that exists is not transmitted at all, but rather is calculated at each subscriber unit based on weighted channel coefficients determined from the different element pilots received at the subscriber unit—see Harrison, col. 3, line 42-col. 4, line 13, and col. 4, lines 18-29.

Even a cursory reading of Harrison reveals that there is no transmission of a synthesized pilot signal, that the only synthesized pilot signals disclosed by Harrison are calculated internal to each subscriber unit, and that Harrison nowhere discloses joint pilot transmissions of any sort. Respectfully, the examiner's numerous errors in explaining Harrison, and in asserting that Harrison anticipates the second element of claim 1, or any element of any claim in the instant application, are deeply troubling to the applicant.

With respect to the third and fourth elements of claim 1, Harrison does not teach the use of dummy pilot signal and, therefore, does not teach receiving receiver loop-back signals having dummy pilot interference or using such loop-back signals at the transmitters to revise the propagation channel estimates maintained at the transmitters. Despite these errors, the examiner argues that the third and fourth elements of claim 1 are anticipated based on the argument that “the synthesized pilot is used as a reference between the transmitter and receiver to monitor traffic channels for errors.” That statement by the examiner is difficult to understand in terms of how it might be relevant to applicant’s claim language, and it also is in error with respect to the plain operation of Harrison. The synthesized pilot calculated at each subscriber unit of Harrison is used by the subscriber unit to channel-compensate received modulation symbols for propagation channel phase/amplitude distortions—it really has nothing to do with “monitoring traffic channels for errors.”

The bottom line is that the examiner’s anticipation arguments based on Harrison are in plain error and are directly contradicted by the plain language of Harrison. Harrison does not teach what the examiner asserts that it does, and Harrison, properly understood, in no way anticipates claim 1. Therefore, the rejections of claim 1, and its dependent claims 2-9, fail as a matter of law and must be withdrawn.

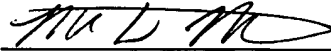
Independent claims 21 and 29, the other independent claims rejected as being anticipated by Harrison, include limitations similar to those in claim 1. That is, claim 21 includes limitations directed to the joint transmission of at least one dummy signal from a number of transmitters, and claim 29 includes limitations directed to loop-back processing based on a jointly transmitted dummy signal. Therefore, for the reasons argued above, the anticipation rejection of claims 21 and 29, and all dependents thereof, fail as a matter of law and must be withdrawn.

Because each independent claim is allowable over the cited art, the examiner’s various obviousness-based rejections of several of the dependent claims in the instant application are

rendered moot. Indeed, the applicant believes that claims now stand in condition for immediate allowance and looks forward to the examiner's next correspondence.

Respectfully submitted,

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